

Appl. No. 09/736,967
Amd. Dated February 7, 2005
Reply to Final Office Action of December 15, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A packet forwarding system, comprising:

- (a) an interface system for receiving packets and having a plurality of channels;
- (b) a plurality of framing service engines; and
- (c) a channel manager for assigning channels to ones of the framing service engines, wherein the channel manager dynamically assigns the channels.

Claim 2 (original): The system as recited in claim 1, wherein the channel manager is configured to receive data about the framing service engines.

Claim 3 (original): The system as recited in claim 2, wherein the channel manager is configured to assign channels to ones of the framing service engines on the basis of the data.

Claim 4 (original): The system as recited in claim 3, wherein the data includes information about utilization of framing service engines.

Claim 5 (original): The system as recited in claim 4, further comprising a framing memory for buffering communication between the interface system and the plurality of framing service engines.

Claim 6 (original): The system as recited in claim 4, wherein at least one framing service engine is configured to frame packets and at least one framing service engine is configured to deframe packets.

Claim 7 (original): The system as recited in claim 6, wherein the framing service engines are configured to operate on HDLC packets.

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Claim 8 (original): The system as recited in claim 7, wherein the interface system comprises a plurality of network interfaces terminating a plurality of point to point links.

Claim 9 (currently amended): A packet processing system comprising:
an interface system comprising a plurality of network interfaces, said interface system terminating a plurality of point to point links; and
a framing system providing framing services to support said plurality of network interfaces in terminating said plurality of point to point links, wherein said framing system comprises a plurality of framing service engines and a channel manager, the channel manager being arranged to actively allocate framing service engine ones of said plurality of point to point links requiring framing services.

Claim 10 (canceled):

Claim 11 (previously presented): The packet processing system of claim 9 wherein said channel manager that actively allocates framing service engine ones of said plurality of point to point links requiring framing services dynamically allocates said framing service engine ones of said plurality of point to point links.

Claim 12 (previously presented): The packet processing system of claim 9 further comprising a framing memory to buffer communication between said plurality of framing service engines and said plurality of network interfaces.

Claim 13 (previously presented): The packet processing system of claim 9 wherein at least one of said framing service engines comprises a framing engine and a deframing engine.

Claim 14 (original): The packet processing system of claim 9 wherein said plurality of point to point links operate according to PPP and said framing system provides framing services in accordance with HDLC protocol.

Claim 15 (previously presented): A method of processing packets with an interface system having a plurality of channels, comprising the steps of:

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- (a) providing a plurality of framing service engines; and
- (b) dynamically assigning channels to ones of the framing service engines.

Claim 16 (original): The method as recited in claim 15, further comprising the step of receiving data about the framing service engines.

Claim 17 (original): The method as recited in claim 16, wherein the step of assigning channels to ones of the framing service engines includes the step of assigning channels on the basis of the data.

Claim 18 (original): The method as recited in claim 17, wherein the step of receiving data about the framing service engines includes receiving information about utilization of framing service engines.

Claim 19 (original): The method as recited in claim 18, further comprising the step of buffering communication between the interface system and the plurality of framing service engines.

Claim 20 (previously presented): A computer program product for processing packets with an interface system having a plurality of channels, comprising a computer usable medium having machine readable code embodied therein for performing the steps of:

- (a) providing a plurality of framing service engines; and
- (b) dynamically assigning channels to ones of the framing service engines.

Claim 21 (previously presented): A computer program product for processing packets with an interface system having a plurality of channels and a plurality of framing service engines, comprising a computer usable medium having machine readable code embodied therein for performing the step of dynamically assigning channels to ones of the framing service engines.

Claim 22 (previously presented): The computer program product as recited in claim 21, further configured to perform the step of receiving data about the framing service engines.

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Claim 23 (previously presented): The computer program product as recited in claim 22, wherein the step of assigning channels to ones of the framing service engines includes the step of assigning channels on the basis of the data.

Claim 24 (previously presented): The computer program product as recited in claim 23, wherein the step of receiving data about the framing service engines includes receiving information about utilization of framing service engines.

Claim 25 (previously presented): The computer program product as recited in claim 24, further configured to perform the step of buffering communication between the interface system and the plurality of framing service engines.

Claim 26 (previously presented): A packet forwarding system, comprising:

- (a) means for receiving packets, the packets having a plurality of channels;
- (b) a plurality of means for framing; and
- (c) means for dynamically assigning channels to ones of the means for framing.

Claim 27 (previously presented): The system as recited in claim 26, wherein the means for assigning channels is configured to receive data about the means for framing.

Claim 28 (previously presented): The system as recited in claim 27, wherein the means for assigning channels is configured to assign channels to ones of the means for framing on the basis of the data.

Claim 29 (previously presented): The system as recited in claim 28, wherein the data includes information about utilization of the means for framing.

Claim 30 (previously presented): The system as recited in claim 29, further comprising means for buffering communication between the means for receiving packets and the plurality of means for framing.

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Claim 31 (previously presented): The system as recited in claim 30, wherein at least one means for framing is configured to frame packets and at least one means for framing is configured to deframe packets.

Claim 32 (previously presented): The system as recited in claim 31, wherein the means for framing are configured to operate on AHDLC packets.

Claim 33 (previously presented): The system as recited in claim 32, wherein the means for receiving packets comprises a plurality of means for receiving packets terminating a plurality of point to point links.

Claim 34 (previously presented): The packet processing system of claim 13 wherein the framing engine is arranged to frame data packets from higher layer protocols and the deframing engine is arranged to deframe data streams from lower layer protocols.

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